

1 **WHAT IS CLAIMED IS:**

2 1. An amplifier circuit sharing a common current source comprising a
3 first amplifier (10), a second amplifier (20) and a shared current source (30), both
4 having a gain stage (11) and an output stage (12), wherein
5 the output stage (12) of the first amplifier (10) is coupled to a current
6 source (30), and when the second amplifier (20) is cascaded onto the first
7 amplifier (10), the cascading causes the current source (30) of the second
8 amplifier (20) to be connected in series to the output stage (12) of the first
9 amplifier (10) to share a common current source.

10 2. The amplifier circuit as claimed in claim 1, wherein the current source
11 (30) is formed by a current mirror using two PMOS transistors.

12 3. The amplifier circuit as claimed in claim 1, wherein the current source
13 (30) is formed by a current mirror using two NMOS transistors.

14 4. The amplifier circuit as claimed in claim 1, wherein the first amplifier
15 (10) is a Class A amplifier.

16 5. The amplifier circuit as claimed in claim 1, wherein the first amplifier
17 (10) is a Class B amplifier.

18 6. The amplifier circuit as claimed in claim 1, wherein the first amplifier
19 (10) is a Class AB amplifier.

20 7. The amplifier circuit as claimed in claim 2, wherein the first amplifier
21 (10) is a Class A amplifier.

22 8. The amplifier circuit as claimed in claim 2, wherein the first amplifier
23 (10) is a Class B amplifier.

24 9. The amplifier circuit as claimed in claim 2, wherein the first amplifier

1 (10) is a Class AB amplifier.

2 10. The amplifier circuit as claimed in claim 3, wherein the first
3 amplifier (10) is a Class A amplifier.

4 11. The amplifier circuit as claimed in claim 3, wherein the first
5 amplifier (10) is a Class B amplifier.

6 12. The amplifier circuit as claimed in claim 3, wherein the first
7 amplifier (10) is a Class AB amplifier.

8 13. The amplifier circuit as claimed in claim 1, wherein the second
9 amplifier (20) is a Class A amplifier.

10 14. The amplifier circuit as claimed in claim 1, wherein the second
11 amplifier is a Class B amplifier.

12 15. The amplifier circuit as claimed in claim 1, wherein the second
13 amplifier (20) is a Class AB amplifier.

14 16. The amplifier circuit as claimed in claim 2, wherein the second
15 amplifier (20) is a Class A amplifier.

16 17. The amplifier circuit as claimed in claim 2, wherein the second
17 amplifier (20) is a Class B amplifier.

18 18. The amplifier circuit as claimed in claim 2, wherein the second
19 amplifier (20) is a Class AB amplifier.

20 19. The amplifier circuit as claimed in claim 3, wherein the second
21 amplifier (20) is a Class A amplifier.

22 20. The amplifier circuit as claimed in claim 3, wherein the second
23 amplifier (20) is a Class B amplifier.